

IN THE CLAIMS:

Please substitute for corresponding pending claims the claims as shown rewritten below with amendments effected therein. Appendix I is attached hereto having marked versions of said claims with amendments indicated by brackets and underlining.

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1. (Amended) A vehicle alignment gauging system, comprising:
- dimension measuring means for directly measuring a linear dimension;
- output signal generation means for generating an output signal corresponding to the linear dimension indicated by the measuring means;
- storage means for storing reference data corresponding to standard reference dimensions for a selected vehicle;
- comparator means for comparing the output signal with a selected reference dimension from the storage means and generating an error signal indicative of the variation therebetween; and
- variation display means for providing a visual indication of the magnitude of the variation, thereby, in use, to provide a quantitative indication of structural misalignment.

2. (Amended) A system according to claim 1, wherein said measuring means include an extendable measuring tape, and the output signal is indicative of one of an operative and extended length of the tape.

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3. (Amended) A system according to claim 2, wherein said measuring tape comprises a flexible steel blade calibrated with visual indicia and which is extendable by unwinding from a spool contained within a housing.

4. (Amended) A system according to claim 3, further including bias means for applying a biasing force tending resiliently to retract the tape by rewinding onto the spool.

5. (Amended) A system according claim 4, wherein the output signal generation means include a position transducer which generates the output signal in a form of one of an electric current and a voltage indicative of said one of the operative and extended length of the measuring tape.

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8. (Amended) A system according to claim 7, further including output signal display means for displaying a visual indication of said one of the operative and extended length of the measuring tape according to the output signal, thereby to

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permit visual correlation between the indicia on the measuring tape and the output signal.

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11. (Amended) A system according to claim 10, wherein the output signal display means associated with each said measuring tape are disposed one of on and adjacent said housing.

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13. (Amended) A system according to claim 12, wherein said storage means include at least one of a CD ROM, a floppy disk, an internal hard disk, a magnetic tape drive, random access memory (RAM) and read only memory (ROM).

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17. (Twice amended) A system according to claim 10, wherein the variation display means are disposed one of on and adjacent the housing to provide direct feedback of the error signal to the operator while working on the vehicle.

18. (Twice amended) A system according to any one of claims 1 to 8, further including recording means for recording the error signal in relation to the corresponding reference dimension in response to a command input by an operator, thereby to provide a record of the extent of structural deviation from specification after repair work has been carried out.

19. (Amended) A system according to claim 18, wherein the recording means include printing means for producing a hard copy of a report after repair operations have been carried out, to confirm that deviations from specification are within acceptable tolerances.

20. (Twice amended) A system according to claim 10, further including a remotely operable scrolling mechanism, located on or adjacent the housing, for permitting an operator to scroll through a range of selected reference dimensions and to view on the variation display means a corresponding sequence of calculated variation measurements derived from the error signals while working on the vehicle.

21. (Twice amended) A system according to any one of claims 1 to 8, further comprising:

a datum bar;

a pair of first carriage assemblies slidably mounted to the datum bar;

attachment means for releasably securing each of said first carriage assemblies to a respective datum point on the vehicle and thereby to suspend the datum bar in a transverse orientation beneath the vehicle; and

a trammel bar connected at one end to said datum bar by connection means, the connection means being adjustable to selected positions along the datum bar and

permitting a degree of universal movement of the trammel bar relative to the datum bar.

22. (Amended) A system according to claim 21, wherein the measuring means are mountable on the trammel bar to provide measurement readings relative to the datum bar.

24. (Twice amended) A system according to claim 10, wherein:

said housing further includes a slidable reference pointer connectable with the vertically oriented measuring tape for engagement with selected datum points on the vehicle such that with the trammel bar in a generally horizontal orientation;

the vertical tape provides a measure indicative of the vertical distance between the datum bar and the reference pointer; and

the horizontal tape provides a measure of the horizontal distance between the datum bar and the reference pointer.

25. (Amended) A system according to claim 24, further including adjustable leveling means to indicate when the trammel bar is oriented horizontally relative to the vehicle.

26. (Amended) A system according to claim 25, wherein the leveling means include a detachable spirit level.

Please add the following claims.

--27. A system according to claim 1, further comprising at least one attachment mechanisms for releasably securing at least a portion of said dimension measuring means to a vehicle being measured.


28. A vehicle alignment gauging system, comprising:
a linear distance measuring device by which a linear dimension between reference points can be directly determined;

a signal generator which generates an output signal corresponding to the linear dimension;

a storage memory in which reference data is stored corresponding to standard reference dimensions for a selected vehicle;

a comparator which compares the output signal with a selected one of said reference dimensions and generates an error signal indicative of the variation therebetween; and

a display which provides a visual indication of a magnitude of the variation, thereby providing a quantitative indication of structural misalignment.



29. A method of gauging vehicle alignment, comprising:

- directly measuring a linear dimension by displacement of an extendable member;
- generating an output signal corresponding to the linear dimension;
- storing reference data corresponding to standard reference dimensions for a selected vehicle;
- comparing the output signal with a selected reference dimension from the storage means;
- generating an error signal indicative of the variation between the selected reference dimension and the output signal; and
- displaying a visual indication of the magnitude of the variation to provide a quantitative indication of structural misalignment.—

IN THE ABSTRACT:

Please replace the abstract with the substitute abstract submitted on the following separate page.